

## **REMARKS**

Claims 1 through 22 are pending in the present application with Claims 1 and 10 being amended and Claims 21 and 22 being newly added.

The Examiner rejected Claims 1-6, 8 and 9 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,169,400 to Mühling et al. (hereinafter "the Mühling '400 Patent") in view of U.S. Patent No. 4,759,110 to Rieger et al. (hereinafter "the Rieger '110 Patent"). Applicants respectfully submit that currently amended Claim 1 is patentable over the combination of references cited (i.e., the Mühling '400 Patent and the Rieger '110 Patent). The Office Action acknowledges that the Mühling, et al. '400 Patent does not disclose a shrink-fit relative to a driver such that the driver may be withdrawn from the bore without altering the cross-sectional shape of the bore. Accordingly, the Office Action cites the Rieger '110 Patent suggesting that such patent evidences "the use of a shrink-fit relative to the driver, and the driver may be withdrawn from the bore without altering the cross-sectional shape of the bore". (See page 2 of the Office Action)

Applicants respectfully submit that the Rieger '110 Patent, contrary to that which is asserted in the Office Action, fails to overcome the acknowledged shortcomings of the Mühling, et al. '400 Patent. The Rieger '110 Patent discloses a cylindrical ceramic piston (i.e., piston 1) that is friction-locked into a steel holder (i.e., holder 2) having a bore by contraction of the steel holder. As disclosed in the Rieger '110 Patent, before the piston and holder are fitted together the bore of the holder is of slightly smaller diameter (i.e., diameter D) than the diameter (i.e., diameter d) of the part of the piston which is to reside in the bore after the piston and holder have been friction-locked together. (See, col. 2, lines 45-62). Hence, as outlined in Claims 1, 8 and 9 of the Rieger '110 Patent (See, col. 3, lines 31-52, col. 4, lines 14-51), diameter D of the bore is enlarged upon heating so as to be greater than or equal to diameter d of the piston and to thereby allow a portion of the piston to be placed within the bore to form an assembly. The assembly is then cooled causing diameter D to shrink and allowing the holder to

contract about a portion of the piston.

With respect to currently amended Claim 1 of the present application, Applicants respectfully note that the bore of the bone screw is capable of shrinking and molding itself to the driver (See page 1, lines 29-33) so that the cross-sectional shape of the bore is closely mated to the cross-sectional shape of the driver. Thus, in contrast to the holder of the Rieger '110 Patent, it is unnecessary to first enlarge the cross-sectional area or diameter of the screw/bore so as to accommodate the driver. Further, it is respectfully submitted that the flange/holder of the Rieger '110 Patent retains its shape while tightening about the ceramic cylinder/piston, rather than molding itself to the cylinder/piston's shape. Accordingly, at least for these reasons, reconsideration and withdrawal of the rejection of Claim 1 are respectfully requested.

With particular respect to Claims 2-6, 8 and 9 of the present application, each of which depends either directly or indirectly from Claim 1, Applicants respectfully submit that such claims are patentable over the combination of references cited at least for the reasons discussed above with respect to Claim 1. Accordingly, reconsideration and withdrawal of the rejection of such claims are respectfully requested.

The Examiner also rejected Claims 7 and 10-20 under 35 U.S.C. 103(a) as being unpatentable over the Mühling '400 Patent in view of the Rieger '110 Patent and in further view of U.S. Patent No. 5,827,287 to Tunc (hereinafter "the Tunc '287 Patent"). Applicants respectfully submit that present Claims 7 and 10-20 are patentable over the combination of references cited (i.e., the Mühling '400 Patent, the Rieger '110 Patent, and the Tunc '287 Patent) for the following reasons.

With respect to Claim 7, which depends indirectly from Claim 1, it is respectfully submitted that the Tunc '287 Patent, which was cited for allegedly evidencing "the use of bio-absorbable glass to cause nucleation and to form a self-supporting member" (See, page 4 of the Office Action), fails to address the above-identified/discussed shortcomings of both the Mühling

\*400 Patent and the Rieger '110 Patent. Accordingly, at least for this reason, reconsideration and withdrawal of the rejection of Claim 7 are respectfully requested.

With respect to Claim 10, the Office Action contends that the "steps, as set forth, would have obviously been carried out in the operation of the device, as set forth above" (See page 4 of the Office Action). Accordingly, it is assumed that the method claims have been rejected on the same basis as Claim 1. As currently amended Claim 1 is believed to be in condition for allowance, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 10, and allowance thereof, at least for the reasons discussed with respect to Claims 1. In addition, it is respectfully noted that currently amended Claim 10 clarifies that the bore of the bone screw molds itself to the driver such that the cross-sectional shape of the bore is closely mated to the cross-sectional shape of the driver, in accordance with currently amended Claim 1.

Regarding Claims 11-20, which depend either directly or indirectly from Claim 10, Applicants respectfully submit that such claims are likewise patentable over the cited combination of references at least for the reasons discussed with respect to Claims 1 and 10. Thus, reconsideration and withdrawal of the rejection of such claims are respectfully requested.

With respect to the newly added Claims 21 and 22, which depend directly from Claim 1, Applicants respectfully submit that such claims are also patentable over the cited reference combination for reasons previously discussed. Further, Applicants note that such claims present do not present new matter or issues and are fully supported by the original application.

In sum, for the reasons stated above, Applicants believe that the present application is in condition for allowance and respectfully urge the allowance of the claims presented therein. If the Examiner believes that there are additional issues to be addressed that may be resolved through a telephone interview, he is respectfully urged to contact Applicants' attorney at the telephone number provided below.

The Examiner is hereby authorized to charge the fees for the two additional claims (\$36) and the one-month extension petition (\$110) to Deposit Account No. 501402. No additional fees are believed to be due in connection with the submission of this Amendment. If any such fees are due, including extension and petition fees, the Examiner is hereby authorized to charge them to Deposit Account No. 501402.

Respectfully Submitted,

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A handwritten signature in black ink, appearing to read 'William Smith', is written over the printed name.

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